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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/287,570	04/06/1999	AKIHISA USHIKAWA	Q53866	6456

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EXAMINER

ABELSON, RONALD B

ART UNIT PAPER NUMBER

2663

DATE MAILED: 05/17/2002

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/287,570

Applicant(s)

USHIROKAWA ET AL.

Examiner

Ronald Abelson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 April 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-95 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-95 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 April 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3-5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Claim Rejections - 35 USC § 112

1. Claims 3, 27, and 51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant refers to two time intervals and both seem to refer to the first control signal.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this

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application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 1, 7, 18 - 22, 25, 31, 42 - 46, 49 - 50, 55, 66 - 70, 72 - 73, 83, and 91 - 93 are rejected under 35 U.S.C. 102(e) as being anticipated by Dahlman (US 5,896,368).

Regarding claims 1, 7, 25, 31, 49, 55, 72, 73, and 83, Dahlman teaches a method and apparatus for a mobile communication system (fig. 1 box 120 a-m, col. 4 line 63 - col. 5 line 21). The transmission control means for providing a vacant period / compressed mode, in which no data is present, in one or more communication frames, (fig. 3B, col. 3 line 19 - 30), and inserting a first control signal for maintaining a communication quality in said vacant period (pilot signal, col. 8 line 66 - col. 9 line 15).

Regarding claims 18, 42, 66, and 91, a vacant period is provided by compressing transmission data in communication in a communication time link (fig. 3B, col. 3 line 59 - col. 4 line 3).

Regarding claims 19, 43, 50, 67, and 92, communication mode is switched into a mode where said vacant period is provided at

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a predetermined time interval (duty cycle, normal mode, compressed mode, col. 9 lines 56 - 62, col. 10 lines 19 - 29).

Regarding claims 20, 44, 68, and 93, communication is switched into a mode where said vacant period is provided by issuing a notice from base station to mobile station (primary code set M, primary code set M and secondary code set N, col. 8 lines 17 - 41).

Regarding claims 21, 45, and 69, mode is switched depending upon a link quality condition (radio propagation conditions, col. 9 lines 14 - 30).

Regarding claims 22, 46, and 70, mode is switched depending upon congestion (interfering factors, col. 9 lines 16 - 30).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the

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art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 23-24 / 47-48 / 71 / 94-95 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dahlman as applied to claims 1 / 25 / 49 / 72 above.

Although Dahlman does not specifically teach issuing a notice from the mobile station to the base station, the inventor does state the compressed mode is used intermittently at a rate determined by the mobile station or network (col. 9 lines 16 - 30).

Therefore, it is obvious that a method must exist for the mobile station to inform the base station to change the transmission mode.

5. Claims 2, 4 - 6, 8 - 17, 26, 28 - 30, 32 - 41, 52 - 54, 56 - 65, 74 - 82, and 84 - 90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dahlman, and further in view of Andoh.

Regarding claims 2, 4 - 5, 8, 26, 28 - 29, 32, 52 - 53, 56, and 76, in addition to the limitations of claim 1, Dahlman teaches a second control signal (power control, col. 6 lines 32 - 64).

Dahlman is silent on the locations of the pilot signal and power control signal / TPC bit within the frame.

Andoh teaches the pilot symbol(s) immediately preceding the TPC bit (fig. 1).

Therefore it would have been obvious to one of ordinary skill in the art, having both Dahlman and Andoh before him/her and with the teachings [a] as shown by Dahlman, a mobile communication system containing a vacant period / compressed mode, and [b] as shown by Andoh, pilot symbol(s) immediately preceding the TPC bit within the frame, to be motivated to modify the system of Dahlman by placing the power control signal / bit immediately following the pilot signal. This is a logical placement because the pilot signal is used for acquisition. Only after acquisition is acquired may other computations be performed.

Regarding claims 6, 9, 16, 30, 33, 40, 54, 57, 64, 75, 78, 79, 84-85, in addition to the limitations listed in claim 5, the combination of Dahlman and Andoh teaches a third control signal / first pilot signal (fig. 1, see pilot signal block) immediately after the end of the vacant period. The second signal /TPC and a third control signal / pilot signal are used

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for demodulation of the communication data or transmission power control for a forward link (downlink, col. 6 lines 32 - 63).

Regarding claims 10 - 15, 17, 34 - 39, 41, 58 - 63, 65, 74, 77, 80 - 82, and 86 - 90, all the limitations of are taught in claim 16 except the transmission frame format on the reverse link. The combination is silent in this regard. Since the forward link vacant period may be used by the mobile station for performing functions / calculations (Dahlman: col. 3 lines 19 - 30), it would be obvious for the mobile station to also transmit in the compressed format. Then the base station could also use the vacant period to perform functions / calculations.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ronald Abelson whose telephone number is (703) 306-5622. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (703) 308-5340. The fax phone numbers for the organization where this application or proceeding is assigned

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are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.

RA

Ronald Abelson
Examiner
Art Unit 2663

RA

May 14, 2002

MELVIN MARCELO
PRIMARY EXAMINER